

Radford Army Ammunition Plant  
4050 Pepper's Ferry Road, P.O. Box 1  
Radford, VA 24143  
Telephone: 540-639-8766

8 December 2014

Kevin Harlow  
Department of Environmental Quality  
Blue Ridge Regional Office  
3019 Peters Creek Road  
Roanoke, VA 24019



**Subject:** VPDES Permit no. VA 0000248 Renewal Application – revised pages

Dear Mr. Harlow:

Enclosed are revised pages to be included in the Radford Army Ammunition Plant's (RFAAP's) VPDES Permit No. VA0000248 renewal application.

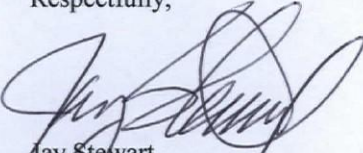
1. **Form1** was revised to include the operator name
2. **2C page 3** section V.D. was revised to include Strontium based on new information provided by a tenant
3. Attachment F - the cooling water and boiler additive list was revised to include additional chemicals

Please discard the present copies and insert the revised copies.

An electronic copy has been provided by e-mail.


If you have any questions or comments, please contact Nikki Herschler at (540) 639-8766 or [Nichole.Herschler@baesystems.com](mailto:Nichole.Herschler@baesystems.com).

Respectfully,



Jay Stewart  
Environmental Manager

Coordination with RFAAP Staff:



Brad Jennings

cc: RFAAP ACO Staff/ Jennings  
File

FedEx tracking # 7721 0567 8110

14-0900-158  
N-Herschler



Form Approved. OMB No. 2040-0086.

<b>FORM 1</b> <b>GENERAL</b>				<b>U.S. ENVIRONMENTAL PROTECTION AGENCY</b> <b>GENERAL INFORMATION</b> Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>		<b>I. EPA I.D. NUMBER</b> VA1210020730		T/A	C		
<b>LABEL ITEMS</b>		PLEASE PLACE LABEL IN THIS SPACE		<b>GENERAL INSTRUCTIONS</b> If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.							
I. EPA I.D. NUMBER											
III. FACILITY NAME											
V. FACILITY MAILING ADDRESS											
VI. FACILITY LOCATION											
<b>II. POLLUTANT CHARACTERISTICS</b> INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of <b>bold-faced terms</b> .											
<b>SPECIFIC QUESTIONS</b>				<b>Mark "X"</b> YES NO FORM ATTACHED		<b>SPECIFIC QUESTIONS</b>				<b>Mark "X"</b> YES NO FORM ATTACHED	
A. Is this facility a <b>publicly owned treatment works</b> which results in a <b>discharge to waters of the U.S.?</b> (FORM 2A)				X		B. Does or will this facility (either existing or proposed) include a <b>concentrated animal feeding operation</b> or <b>aquatic animal production facility</b> which results in a <b>discharge to waters of the U.S.?</b> (FORM 2B)				X	
C. Is this a facility which currently results in <b>discharges to waters of the U.S.</b> other than those described in A or B above? (FORM 2C)				X		D. Is this a proposed facility (other than those described in A or B above) which will result in a <b>discharge to waters of the U.S.?</b> (FORM 2D)				X	
E. Does or will this facility treat, store, or dispose of <b>hazardous wastes?</b> (FORM 3)				X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)				X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)				X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)				X	
I. Is this facility a proposed <b>stationary source</b> which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)				X		J. Is this facility a proposed <b>stationary source</b> which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)				X	
<b>III. NAME OF FACILITY</b> SKIP Radford Army Ammunition Plant											
<b>IV. FACILITY CONTACT</b> A. NAME & TITLE (last, first, & title) Stewart, Jay Env Manager B. PHONE (area code & no.) (540) 639-7631											
<b>V. FACILITY MAILING ADDRESS</b> A. STREET OR P.O. BOX 4050 Pepper's Ferry Road, P.O. Box 1 Radford AAP B. CITY OR TOWN Radford C. STATE VA D. ZIP CODE 24143											
<b>VI. FACILITY LOCATION</b> A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER Route 114 B. COUNTY NAME Montgomery & Pulaski C. CITY OR TOWN Radford D. STATE VA E. ZIP CODE 24143 F. COUNTY CODE (if known)											



CONTINUED FROM THE FRONT

## VII. SIC CODES (4-digit, in order of priority)

A. FIRST										B. SECOND														
C	7	2	8	9	(specify) propellant						C	7	(specify)											
15	16	17	18	19											15	16	17	18	19					
C. THIRD										D. FOURTH														
C	7	(specify)								C	7	(specify)												
15	16	17	18	19											15	16	17	18	19					

## VIII. OPERATOR INFORMATION

A. NAME										B. Is the name listed in Item VIII-A also the owner?																			
C	8	BAE Systems, Ordnance Systems Inc																		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO									
15	16																			55	56								
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)										D. PHONE (area code & no.)																			
F = FEDERAL S = STATE P = PRIVATE M = PUBLIC (other than federal or state) O = OTHER (specify)										F (specify) 56										A (540) 639-7631 15 16 17 18 19 20 21 22 23 24 25 26									

E. STREET OR P.O. BOX																			
4050 Pepper's Ferry Road P.O. Box 1																			
26																			55

F. CITY OR TOWN										G. STATE		H. ZIP CODE		IX. INDIAN LAND	
C	B	Radford								VA		24143		Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
15	16									40	41	42	43	44	45

## X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)										D. PSD (Air Emissions from Proposed Sources)															
C	T	I	9	N	VA0000248						C	T	I	9	P	None									
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)															
C	T	I	9	U	None						C	T	I	9	20656 & 21258										
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
C. RCRA (Hazardous Wastes)										E. OTHER (specify)															
C	T	I	9	R	VA1210020730						C	T	I	9	353 & 433										
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

## XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

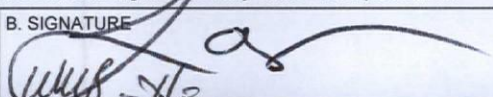
## XII. NATURE OF BUSINESS (provide a brief description)

Radford Army Ammunition Plant is an installation responsible to the U.S. Army Operations Support command whose mission is to manufacture propellants, explosives, and chemical materials as assigned.

Commercial industries operate on site as tenants. These include propellant manufacture and loading, fireworks, loading, machining, and storage.

## XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)										B. SIGNATURE										C. DATE SIGNED									
Luis a. Ortiz, LTC, US Army																				12-10-2014									
W.M. Barnett, General Manager																													

## COMMENTS FOR OFFICIAL USE ONLY

C																		
C																		
15	16																	55



CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding - Complete one set of tables for each outfall - Annotate the outfall number in the space provided.

NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Nitrotoluene	propellant ingredient - analyzed at outfall 029 weekly and outfall 007 monthly as per current permit (Data submitted with DMRs)	Pyrethrins	pest control- contractor uses Pyrethrin products for bee and spider control in confined spaces
Resorcinol*	ingredient in certain propellants - not currently made, but possibly will be made in the future	Triethylamine	Triethylamine is present as Triethylamine Salt in Garlon 3A herbicide. It is a minor ingredient. Garlon 3A is used for broadleaved weed and brush control. Also reagent which is drummed for disposal after use in laboratory.
Butyl Acetate*	used in grain inhibiting		
Xylene*	paint solvent - waste is disposed of off-plant	Monomethyl amine*, Ethylene diamine*, Formaldehyde*	reagents which are drummed for disposal after use in laboratories
Zirconium*	Loaded into munitions in pellet form	Cyclohexane	Laboratory reagent
		Strontium*	Loaded into munitions
*these chemicals are used on plant but we have no reason to believe they are discharged in wastewater			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☒ YES (list all such pollutants below)

☐ NO (go to Item VI-B)

Antimony  
Arsenic  
Copper  
Lead  
Zinc  
Chlorodibromomethane  
Chloroform (lab)  
1,2-Dichloroethane (lab)  
1,1,2,2-Tetrachloroethane  
Methylene Chloride (lab)  
Toluene  
2,4-Dinitrophenol (lab)  
Butyl Benzyl Phthalate  
Diethyl Phthalate  
Di-n-Butyl Phthalate  
2,4-Dinitrotoluene  
2,6-Dinitrotoluene  
Di-n-Octyl Phthalate  
Nitrobenzene (lab)  
N-Nitrosodimethylamine (lab)  
Phenanthrene



# Cooling water and Boiler water additives (revised 12/05/2014)

	Additive	Manufacturer	Use	Estimated usage rate								
1	BromMax 7.1**	Enviro Tech Chemicals, Inc	biocide					120 lb/yr				
2	CoolPro CT462**	Comfort systems water solutions	inhibitor					96 lb/yr				
3	Formula 4690**	Comfort systems water solutions	biocide - tablet	96 lb/yr	96 lb/yr	48 lb/yr						
4	Nalco 3DT288	Nalco Company	anti-scale/anti-corrosion agent							0.56 gal/d		
5	Nalco 7330	Nalco Company	biocide					2 qt/wk		1.03 gal/d		
6	Nalco 73550	Nalco Canada Co.	biode detergent							0.13 gal/d		
7	Nu-Calgon No. 90 Algaecide	Nu-Calgon Wholesaler, Inc.	biocide									
8	pHreeGuard XLP-2350	Nalco						2 qt/day				
9	Stabrex ST70	Nalco	oxidizing biocide							1.03 gal/d		
10	Smart Release 311**		inhibitor	60 lb/yr	60 lb/yr	30 lb/yr						
11	TowerBrom 960	Calgon corp.	Micro biocide					2 lbs/week				
12	CORTROL IS1050	GE Betz	Powdered oxygen scavenger								X	
13	OPTISPERSE AP0200	GE Betz	hardness sequestrant								33,000 lb/yr	
14	Solus AP24 (will replace AP0200 in 01/2015)	GE Betz	hardness sequestrant								0.1 g/l	
15	Solus MCA42 (future use)	GE Betz	water treatment									90 ppm (0.2 gpd)
16	Formula HST-VB	Water Chemistry, Inc	inhibitor	X*	X*	X*	X*					
17	Formula 23-M	Water Chemistry, Inc	biocide	X*	X*	X*	X*					
18	Formula 25-G	Water Chemistry, Inc	biocide	X*	X*	X*	X*					
19	Microbiocide 28-I	Water Chemistry, Inc	biocide	X*	X*	X*	X*					
20	Microbiocide BR-2	Water Chemistry, Inc	biocide	X*	X*	X*	X*					
21	Microbiocide 27-B	Water Chemistry, Inc	biocide	X*	X*	X*	X*					
22	Formula CWT-1	Water Chemistry, Inc	inhibitor	X*	X*	X*	X*					
Operation >				chiller	cooling tower	cooling tower	chiller	chiller	cooling tower	cooling tower	boiler water	boiler water
Area >				Nitrator	Solvent	NG-2	Admin bldg	multiple areas	Solvent	NAC/SAC	Power House	FEF - NRE
Building >				3045	2600	9465, 9488	220	3522	1569	750	400	
blowdown discharged to Outfall >				007	029	029	026	029	005	007	007	029

\* biocide - rotated for effectiveness

\*\* being phased out